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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,174	04/30/2001	Bernd Froehlich	0179-0167P	3536
2292	7590	11/16/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			DHARIA, PRABODH M	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/763,174

Applicant(s)

FROEHLICH ET AL.

Examiner

Prabodh M Dharja

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02-20-2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. **Status:** Receipt is acknowledged of papers submitted August 06, 2004 under amendments, which have been placed of record in the file. Claims 1-14 are pending in this action.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,4,5-7,11-14, rejected under 35 U.S.C. 103(a) as being unpatentable over Yasutake (5,729,249) view of Suzuki (6,130,664), and further in view of Hall et al. (5,703,623).

Regarding Claim 01, Yasutake teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. Col. 6, lines 45,46), three control signal generating devices for generating first control signals to the display device (Col. 6, Lines 43-48), three mutually orthogonal actuating elements (figure 7, Col. 9, Lines 11-15), each being supported at or in the housing for linear displacement along one of three orthogonal spatial axes (x, y, z) (figure 7, Col. 9, Lines 9-15) and projecting outward beyond the housing within at least one of two opposite portions of the housing, respectively, each actuating element respectively cooperating with a different one of the control signal generating devices (figure 7, Col. 9, Lines 11-27), and wherein, in dependence on the displacement position of the actuating elements, the control signal generating devices generate the first control signals for displacement of the object on the display

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device along three directions corresponding to the spatial axes of the housing on the display device (Col. 4, Lines 1-3, Col. 9, Lines 11-27).

However, Yasutake fails to teach a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing.

However, Suzuki teaches a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing (Col. 8, Lines 11-35, Col.3, Line4 46-63).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Suzuki teaching in teaching of Yasutake for input device be able to generate positional control signal, improving and speeding up its operation without user getting tired; in another word input device to be an user friendly device.

Yasutake teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33).

However, Yasutake modified by Suzuki fail to recite specifically a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and the position of the housing.

However, Hall et al. recites and teaches specifically a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the

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orientation and the position of the housing (Col. 4, Line 61 to Col. 5, Line 48, Col. 12, Line 61 to Col. 13, Line 6, Col. 14, Line 30-39).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Hall et al. teaching in teaching of Yasutake modified by Suzuki for input device be able to have a low cost semiconductor, position and orientation-sensing circuit designed for communication of spatial coordinate data to other electronic devices for internal or external control of such devices.

Regarding Claim 04, Yasutake teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. Col. 6, lines 45,46), three control signal generating devices for generating first control signals to the display device (Col. 6, Lines 43-48), three pairs of actuating elements responsive to actuating conditions, both actuating elements in each pair being arranged at different, in particular opposite (figure 1, Col. 5, Lines 36-47) portions of the housing lying on a respective one of three orthogonal spatial axes extending through the housing (figure 1, Col. 5, lines 53-67), each pair of actuating elements respectively cooperating with a different one of the control signal generating devices (Col. 5, Lines 56-67), and wherein, in dependence on the actuating conditions of the actuating elements, the control signal generating devices generate the first control signals for displacement of the object on the display device along three directions corresponding to the spatial axes of the housing on the display device (Col. 5, Lines 53-58),

However, Yasutake fails to teach a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing.

However, Suzuki teaches a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing (Col. 8, Lines 11-35, Col.3, Line4 46-63).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Suzuki teaching in teaching of Yasutake for input device be able to generate positional control signal, improving and speeding up its operation without user getting tired; in another word input device to be an user friendly device.

Yasutake teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33).

However, Yasutake modified by Suzuki fail to recite specifically a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and the position of the housing.

However, Hall et al. recites and teaches specifically a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and the position of the housing (Col. 4, Line 61 to Col. 5, Line 48, Col. 12, Line 61 to Col. 13, Line 6, Col. 14, Line 30-39).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Hall et al. teaching in teaching of Yasutake modified by Suzuki for input device be able to have a low cost semiconductor, position and orientation-sensing circuit designed for communication of spatial coordinate data to other electronic devices for internal or external control of such devices.

Regarding Claim 05, Yasutake teaches the actuating elements are supported at or in the housing for rotation about their axes (x, y, z) extending in the respective direction of displacement and wherein the control signal generating devices generate second control signals to the display device in dependence on the rotational positions of the actuating elements (Col. 9, Lines 9-42, Col. 19, Lines 51-67).

Regarding Claim 06, Yasutake teaches a rotary actuating element is provided per actuating element, which is rotatable around the axis of the associated actuating element extending in the direction of displacement (x; y; z) and wherein the control signal generating devices or additional control signal generating devices generate second control signals to the display device in dependence on the rotational position of the rotary actuating elements (Col. 9, Lines 9-42, Col. 1, Lines 14-22, Col. 20, Lines 10-40).

Regarding Claim 07, Yasutake teaches the actuating elements penetrate the rotary actuating elements (Col. 9, Lines 9-42).

Regarding Claim 11, Yasutake teaches the housing has the shape of a parallelepiped (Webster defines as six parallelogram planes connected in the space-cube or polyhedron), in particular a cube, and the actuating elements protrude from all side walls of the housing or are arranged on all side walls of the housing (Col. 5, Line 53 to Col. 6, Line 6).

Regarding Claim 12, Yasutake teaches the housing is spherical in shape and the actuating elements are protrude from or are arranged in substantially diametrically opposite regions (Col. 2, Lines 27-30, figure 18, Lines 42-49).

Regarding Claim 13, Yasutake teaches the housing substantially corresponds to the outer contour of an object to be displayed on the display device and the actuating elements are arranged corresponding to the axes along which the object may be controlled in its representation (figure 30, 33a1, 33a2, Col. 14, Lines 34 to Col. 15, Line 6).

Regarding Claim 14, Yasutake teaches a display system for representing sectional views of an object that are adapted to be displaced along orthogonal axes (figure 28b, 28d, 28f, Col. 13, Line 65 to Col. 14, Line 18) comprising a display device and an input device for generating control signals for displacing and/or orienting and/or positioning the object to be represented and/or displacing the sectional views along the axes (x, y, z), the input device being configured according to one of the previous claims (33a2, 33b2, 33c2, Col. 13, Line 65 to Col. 15, Line 43).

Suzuki teaches a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and



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generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing (Col. 8, Lines 11-35, Col.3, Line4 46-63).

Hall et al. recites and teaches specifically a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and the position of the housing (Col. 4, Line 61 to Col. 5, Line 48, Col. 12, Line 61 to Col. 13, Line 6, Col. 14, Line 30-39).

4. Claims 2,3,8-10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasutake (5,729,249) in view of Suzuki (6,130,664) as applied to claims 1,4,5-7,11-14, as above and further in view of Levin et al. (6,154,201).

Regarding Claim 02, Yasutake modified by Suzuki teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. Col. 6, lines 45,46).

However, Yasutake modified by Suzuki fails to teach the actuating elements are supported in or at the housing around a rest position, in particular centered about a rest position, and automatically move back into the rest position upon displacement from the same.

However, Levin et al. teaches the actuating elements are supported in or at the housing around a rest position, in particular centered about a rest position, and automatically move back into the rest position upon displacement from the same (Col. 1, Line 60 to Col. 2, Line 15, Col. 2, Lines 38-40, Col. 5, Lines 47-65).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Levin et al. in Yasutake modified by Suzuki teaching for having a user friendly input device with greater control of functionality.

Regarding Claim 03, Levin et al. teaches only upon a displacement from the rest position, will the control signal generating devices generate control signals in dependence on the direction and/or degree of displacement (Col. 1, Line 60 to Col. 2, Line 50).

Regarding Claim 08, Yasutake modified by Suzuki teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. Col. 6, lines 45,46).

However, Yasutake modified by Suzuki fails to teach at or in the housing, switches or key switches or other actuating elements are arranged for providing further control signals to the display device(10).

However, Levin et al. teaches at or in the housing (Col. 4, Lines 54,55), switches or key switches or other actuating elements are arranged for providing further control signals to the display device (Col. 4, Lines 48-50).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Levin et al. in Yasutake modified by Suzuki teaching for having a user friendly input device with greater control of functionality.

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Regarding Claim 09, Levin et al. teaches actuating element and - if provided - per rotary actuating element, one means for preventing further displacement or turning, the means being controllable by the display device in dependence on the position an object represented on the display device is in within an environment also represented on the display device (Col. 3, Lines 7-36, Col. 5, Lines 47-65).

Regarding Claim 10, Levin et al. teaches the preventing means comprises a mechanical braking/blocking device for blocking the respective actuating element and/or the rotary element, or a drive means for moving or turning the actuating element and/or the rotary actuating element (Col. 1, Line 60 to Col. 2, Line 15, Col. 2, Lines 38-40, Col. 5, Lines 47-65).

### *Response to Arguments*

5. Applicant's arguments filed 08-06-2004 have been fully considered but they are not persuasive.

Applicant argues applicant's claimed benefit of priority date antedates the cited reference of Levin et al. patent number 6,154,201.

Examiner disagrees as Levin et al. patent number 6,154,201 also claims benefit of earlier filed application number 09/049,155, which has application date of March 26, 1998, which antedates applicant's priority date. The '155 is an US patent No. 6,128,006. US patent '006 teaches cursory review (Col. 4-10), and similarly US patent 201 also claims benefit of US patent no. 6,061,004 which claims benefit of priority date of 1995, which also antedates applicant's

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priority date of 1998, and US patent '004 also teaches claimed cursory review (Col. 6-18) and Levin et al. does teach cursory review through out the application (Cols. 6-9).

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yasutake, Suzuki Hall et al. and Levin et al. combination does obviate. Yasutake teaches an input device for control signals for controlling the movement of an object represented on a display device, Suzuki teaches a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing, Hall et al. teaches not only orientation also the position of the housing relative to object, and Levin et al. teaches claimed cursory review. Combination teaches applicant's invention and combination does produce specific result of applicant's teaching.

7. Applicant argument about the cited references fails to teach orientation/position detecting sensor of the mouse is moot because of new ground of rejection.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is informed that all of the other additional cited references either anticipate or render the claims obvious. In order to not to be repetitive and exhaustive, the examiner did draft additional rejection based on those references.

### *Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M Dharia whose telephone number is 703-605-1231. The examiner can normally be reached on M-F 8AM to 5PM.

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11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-3054938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-3054938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

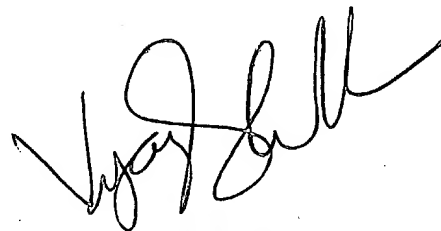
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November 12, 2004



VIJAY SHANKAR  
PRIMARY EXAMINER